

Customer No.: 31561
Application No.: 10/064,766
Docket NO.:8043-US-PA

REMARKS

Present Status of the Application

It is noted with great appreciation that the Office Action considers claims 1-4 allowed. The Office Action, however, has rejected claims 5-7 as being anticipated by Wu (US 6,482,744) and claims 8-10 as being unpatentable over Wu (US 6,482,744).

After carefully considering the remarks set forth in this Office Action and the cited references, Applicant respectfully submits that the presently pending claims are in condition for allowance. Reconsideration and withdrawal of the Examiner's rejection are requested.

Discussion of the 35 U.S.C § 102 & 103 Rejections

The Office Action rejected claims 5-7 under 35 U.S.C. 102(e) as being anticipated by Wu et al. (US 6,482,744).

As stated in the MPEP§2131.01, 8th ed., February 2003., "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. V. Union Oil co. of California, 814 F2d 628, 631, 2 USPQ2D 1051, 1053 (Fed. Cir. 1987). Applicant respectfully asserts that Wu is legally deficient for the purpose of anticipating claim 5 for the reasons that Wu fails to teach each element of the claim under consideration.

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The present invention teaches in claim 5, among other things, "...performing the etching process with a height of the susceptor in the etching chamber being adjusted to an optimum height that results in a minimum deviation of etching depth of the material layer in the etching process." In brief, the present invention teaches that the etching process is conducted at one optimum height and a minimum deviation of the etching depth is resulted. Since a minimum deviation of the etching depth corresponds to a minimum deviation of the etching rate, the solid etching by-products distribute more evenly on the inner wall of the etching chamber. Consequently, fewer particles are generated, and the yield can be increased.

Wu, on the other hand, teaches setting the susceptor at a first predetermined distance in reference to the upper electrode for performing a first etch at the first distance for a first predetermined time, and setting the susceptor at a second predetermined distance in reference to the upper electrode for performing a second etch at the second distance for a second predetermined time. It is undoubtedly from Wu's teaching that the etching process is conducted at two different heights instead of one optimum height. Moreover, Wu also fails to teach or suggest performing the etching process at an optimum height to result a minimum deviation of the etching depth.

Accordingly, Wu fails to render claim 5 of the invention anticipated. Since claims 6-7 are dependent claims, which further define the invention recited in claim 5, Applicant respectfully asserts that these claims also are in condition for allowance. Thus, reconsideration and withdrawal of this rejection are respectively requested.

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The Office Action rejected claims 8-10 under 35 U.S.C. 103(a) as being unpatentable over Wu.

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the reference ore references, taken alone or combined, must teach or suggest each and every element recited in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. M.P.E.P. § 2143, 8th ed., February 2003.

With regard to claims 8-10, Applicant respectfully submits that these claims patently define over the prior art for at least the same reason as claim 5-7 discussed above.

As discussed above, Wu fails to teach or suggest performing an etching process with a height of the substrate in the etching chamber being adjusted to an optimum height that results in a minimum deviation of etching depth of the dielectric layer in the etching process. Moreover, as recognized by the Office, Wu is completely silent about the etching process is directed to a corner-rounding etching process for rounding the corner of the opening in which deviation of the etching depth of the dielectric layer in the corner-rounding etching process is minimized. Since there is no explicit teaching or implicit suggestion that the etching process in Wu is directed to a corner-rounding etching process or the entire etching process is

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conducted at an optimum height, the prima facie case of obviousness has not been established because at least the reference or references, taken alone or combined, fails teach or suggest each and every element recited in the claims.

Therefore, Applicant submits that the reference fails to render claim 8 of the invention obvious. Since claims 9-10 are dependent claims which further defines the invention recited in claim 8, Applicant respectfully asserts that these claims also are in condition for allowance. Thus, reconsideration and withdrawal of this rejection are respectively requested.

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CONCLUSION

For at least the foregoing reasons, it is believed that the presently pending claims 1-10 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

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